REMARKS

Claims 1, 3, 4, 5, 8, 10, 11, 13-26 are all the claims pending in the application. Claims 4, 5, and 11, and 13-21 have been withdrawn from consideration.

By this amendment, independent claim 1 has been amended to include the recitations of claim 6, and independent claim 10 has been amended to include the recitations of claim 12. Claims 6 and 12 are canceled.

In addition, the placement of some of some of the claim language of claims 1 and 10 has been changed for the convenience of the Examiner. Of course, this change in placement does not alter the scope of subject matter claimed.

Interview

Applicants thank Examiner Jason Prone and Supervisory Examiner Allan Shoap for the courtesies extended to Applicant's representative John Bird during the personal interview on March 17, 2004 in which claims 1, 3, 6-8, 10, 12, and 22-26 were discussed. In addition, applied references Wantanabe et al. (US 4,214,191), Iwasaki (US 5,304,905), and Kiyohara et al. (US 6,302,602) were discussed.

Applicant's representative commented on the claimed invention and discussed the non-limiting embodiments from the specification. In view of this discussion, the Examiners indicated that further search is necessary, and that a new Non-Final Office Action will be issued if additional art is discovered.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 25 and 26 would be allowable if rewritten in independent form. Applicants, however, hold in abeyance the rewriting of these claims until the Examiner has had a chance to consider the remarks below with respect to independent claim 1.

Drawings and Specification

The Examiner has objected to the drawings, alleging that certain features of the invention are not shown in the drawings. Applicants' respectfully request the Examiner to withdraw the objection in view of the fact that a *non-limiting* embodiment of the claimed invention is shown in Fig. 7.

In addition, the Examiner has objected to the specification as being confusing and difficult to comprehend. Although Applicants disagree with the objection, for the convenience of the Examiner, Applicants have amended the specification to indicate where non-limiting examples of the claimed subject matter are described in the specification. These amendments are not new matter because one of ordinary skill in the art (which the Examiner is not) would have known this relationship.

Claim Rejections Under 35 U.S.C. § 112

In addition, Claims 1, 3, 6-8, 10, 12, and 22-28 are rejected under 35 U.S.C. § 112, first and second paragraph. Applicants respectfully submit that that the specification enables one of

ordinary skill in the art to make and/or use the invention, and that the claims are clear. However, as discussed above, Applicants have made minor amendments to the specification as a courtesy to the Examiner. As such, Applicants respectfully request the Examiner to withdraw these rejections.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 3, 6, 7, 10, and 12 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Wantanabe et al. (US 4,214,191) in view of Iwasaki (US 5,304,905). Claims 22-26 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Wantanabe in view of Iwasaki, and in further view of Kiyohara et al. (US 6,302,602).

Applicants respectfully request the Examiner to withdraw the rejections of independent claims 1 and 10 at least because there is no suggestion to modify the system of Wantanabe so that the system measures a motor current in order to determine when a new cutting tool should be used instead of measuring a tool offset value.

The system in Watanabe determines a tool offset value caused by the wear of the cutting tool, while taking into account the mechanical deformation of the tool due to heat. When the tool offset value reaches a predetermined value, a different cutting tool is used.

Iwasaki describes a motor servo-system controller 3d that is used to control the trajectory of, for example, a machine tool or robot (col. 1, lines 35-37). The controller 3d has a position and speed detector 3, which detects the detected position value 12 and a detected speed value 13 (col. 1, lines 23-29). The detected position value 12 and a detected speed value 13 are input to

the position control section 7 and speed control section 6, respectively (see Fig. 6). A current command value 18 is obtained based *inter alia* on a desired position command value 11 and these detected values (see, col. 1, lines 35-59 & Fig. 6).

The controller 3d also has a current detector 4 and a current control section 5. The current detector 4 detects a detected current value 15, and the current control section 5 compares the detected current value 14 with the current command value 18 to obtain a current error 19. The motor current 20 flowing through the motor 1 is determined based on the current error 19 (see, col. 1, lines 35-59 & Fig. 6).

The Examiner acknowledges that Watanabe does not teach that the parameter detected is a value of current loaded in the motor. Therefore, the Examiner looks to the current detector of Iwasaki in an attempt to make up for this deficiency. However, there is no teaching or suggestion about modifying the system of Watanabe to dispense with the detector for measuring a tool offset value and instead use the current detector 4 of Iwasaki.

It is well settled that there must always be some motivation or suggestion to combine references in the teachings of the prior art or the knowledge of persons of ordinary skill in the art. *See*, for example, *In re Roffet*, 149 F.3d 1350, 1357 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

The Examiner, however, merely asserts that the motivation for modifying Watanabe to use the current detector is to "provide an alternative method of detecting wear," and provides no objective evidence to support this assertion. In fact, Iwasaki does not discuss using the detected

current value 18 as a parameter for detecting wear. This detected current value 18 is instead used to control the system by determining the motor current (col. 1, lines 57-58).

Although the present application discusses using a current value of a motor in order to determine if a rotary blade 58 has worn out (page 11, 3rd full para.), any reliance by the Examiner on this teaching would be impermissible hindsight reasoning. If the Examiner, however, is instead relying on a teaching of the prior art or the knowledge of persons of ordinary skill in the art at the time of the invention, Applicants request that the Examiner provide evidence of this motivation from the applied references, or alternatively evidence of a "specific understanding or technical principle within the knowledge of one of ordinary skill in the art [that] would have suggested the combination." *In re Rouffet*; *see* also MPEP §2144 & §2144.03 (February 2003 Revision).

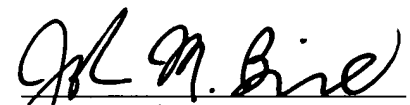
In addition, Applicants respectfully request the Examiner to withdraw the rejections of claims 3, 7, and 8, at least because of their dependency from claim 1, and the rejections of claims and 22-24 at least because of their dependency from claim 1 and because Kiyohara does not make up for the deficiencies in the combination of Kiyohara discussed above.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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